INDEX

PAGE

Absalom, H. W. L., Storm of Nov. 11th—12th, 1929 ... 249
Adams prize 98
African meteorological service, British East 141
Agricultural climatic conditions in Russia and Siberia ... 146
Alabama and Mississippi floods ... 72
Alter, D., Variation of distribution of the annual rainfall 234, 260
Amateurs as pioneers 10
Anemograph, Density of the air and readings of pressure tube 293
Anemometer, Bell Rock 177
—, Research on the Dines ... 7
Anemometers, Defects in the piping of pressure-tube ... 18
Anticyclones and their rôle in atmospheric heat economy ... 19
Applegate, T. H., Smoking sea ... 261
—, Sun pillar 67
Arc, Halo into circumzenithal ... 207
Argentine maize crop and U.S.A. grain crop, Correlation between 214
Ashmore, S. E., Line-squall of July 12th 158
—, March fogs and May frosts ... 210
Ashworth, J. R., Smoke from factory chimneys and rainfall ... 109
Atmosphere as a colloid ... 193, 262
Atmospheric circulation, Charts of 294
Audibility, Unusual 162
Australia, Basis for seasonal forecasting in 88
Autographic charts, Numbering of hours on 160

Baker automatic release for dropping meteorograph 42
Balloons, Maximum heights which it is possible to reach by sounding or pilot 57
Bamford, A. J., Vertical air-currents as measured by pilot balloons 135
Banister, H., Elementary applications of statistical method 291
Banks, F. C., Sun pillar 68
Barometers, Means adopted to obtain satisfactory illumination of our 107
Barometric oscillation and rainfall 191
Barros, J. B. de 98
Basra, Nov. 17th, 1928, Formation of a cumulus or cumulonimbus cloud near 4
Baxter, W. L., Unusual audibility 162
Belasco, J. E., Wet bulb temperatures as "thaw temperatures" 90
Bell Rock Anemometer 177
Ben Nevis, Shortage of snow on 89
Bennett, M. G., Physical conditions controlling visibility ... 259
Benson, Radiation from the sky at 87
Bentley, W. A., Dry weather during 1929 136
Best, A. C., Measurements with pitot-static tube 7
Bigg, W. H., Ice crystals ... 46
—, Inversions and grass minimum temperatures 110
—, March fogs and May frosts ... 166
Bilham, E. G., Bell Rock anemometer 177
—, Raingauges in winter 252
—, and W. F. Higgins, Changes of zero in spirit thermometers 39
Bliss, E. W., Rainfall in the West Indies 290
Bonacina, L. C. W., Notes on the frost 43
—, Summer thunderstorms ... 261
—, Winter of 1928-9 105
Books received ... 146, 195, 218, 243
Botley, C. M., Brilliant parhelia 90
—, Sixteenth century weather ... 290
—, Smoke cloud 113
—, Twelve-rayed ice crystals ... 186
—, Weather lore 138
—, Weather lore among the Italian peasantry 264

286758

PAGE

Bower, S. M., Winter thunderstorms 48
Bowering, D. F., Screen minimum temperatures during radiation nights 114
—, Ten-day period temperatures 120
Braak, C., Climate of the Netherland Indies, Vol. II, Parts 2 and 3 241
Bracey, C. A., Note about Sir John Moore 265
—, Sunshine records during the spring and summer of 1929... 163
Breton, R. S., Pink rainbows ... 13
British Association for the advancement of science ... 325
— floods and droughts 37
— Isles, Changes of temperature with height over the ... 88
— waters, Frequency of waterspouts in 236
Britton, C. E., Pack Ice on the Maplin Sands 47
Brooks, C. E. P., Annual rainfall and average cloud 255
—, Climate changes in Greenland 292
—, Dry weather of January to June, 1929 129
—, Ice crystals 69
—, Lake Moeris and climatic changes 141
—, Muller-Pouillets Lehrbuch der Physik 49
—, Volcanic eruptions and pressure distribution 226
—, Weather 169
—, Winter weather of December, 1928, January-February, 1929 1
—, and G. L. Thorman, Distribution of temperature 6
Brunt, D., Index of refraction of damp air and the optical determination of lapse rate ... 109
—, Surface inversions of temperature 8
—, Warm anticyclones and their rôle in atmospheric heat economy 19
Bumpiness on the Cairo-Basra ronte 258
Burridge, L. C., Rain falling through drizzle 137

Cairo-Basra route, Bumpiness on the 258
Carnegie, Wreck of the 219
Casella, C. F., and Co. 219
Cave, C. J. P., Frequency of rain days 185
—, Phenological report, British Isles, 1928 108
Ceará's droughts, Sir Gilbert Walker's formula for ... 81
Chapman, S. 98, 271
Charts of the atmospheric circulation over the northern hemisphere 294
Cherry culture in England ... 138
Chester, Ice on the sea near ... 66
Chilean meteorological service ... 239
Clark, J. E., Phenological report, British Isles, 1928 108
— and I. D. Margary, Floral isophenes and isakairs ... 289
Clarke, G. A., Means adopted to obtain satisfactory illumination of our barometers ... 107
Clayton, H. H., Solar activity and long-period weather changes 39
Climate, Effect of exposure on 96
— of New Zealand 121
— of the Netherland Indies ... 241
Climates, Geological 145
Climatic changes in Greenland ... 292
— —, Lake Moeris and 141
— conditions, Fossil marine faunas as indicators of ... 145
Climatological Tables for the British Empire ... *monthly*
Climatology and some of its applications 270
Cloud, Annual rainfall and the average amount of 255
—, Appearance of the sun and moon through a cloud ... 232
—, near Basra, Nov. 17th, Formation of cumulus or cumulonimbus 4
Cold spell during February and early March, 1929 29
— — of the year, First 285
Colloid, Atmosphere as a ... 193, 262
Colombo, Small upper air velocities at 211
Colouring of evening sky ... 261
Conference of empire meteorologists, London 201
Convection, A problem of ... 213
Cooke, R., Early cherry culture in England 138
—, Sixteenth century weather ... 231
Cooper, E. D., Green flash ... 207

	PAGE
Corless, R., British floods and droughts	37
—, Old weather diary and a tornado in Dublin in 1850 ...	266
Correlation between Argentine maize crop and U.S.A. grain crop	214
Crepuscular rays, Moonbeams analogous to	115
Crichton, J., Cold spell during February and March, 1929 ...	29
—, Frequency of waterspouts in British waters	236
Crosses in the sky, mock suns and sun pillars	84
Crowe, M. A. C., Air temperatures in a well	47
Crowquill pens, Ink feed for ...	238
Cyclones over the North and East Seas, Regeneration of	239
Dacey, G. E., Notes on the frost	43
—, Sun pillar	68
Damp air and the optical determination of lapse rate, Index of refraction of	109
Dancey, R. P., Notes on the frost	43
Davies, D. E., Barometric oscillation and rainfall	191
Davies, F., Drifting ice on the sea near Chester	66
Density of the air and readings of pressure tube anemograph ...	293
Depression, Thunderstorm at "warm front" of	291
Depressions, Structure of ...	34
Dines, J. S., French daily weather report	154
—, Meteorological conditions associated with high tides in the Thames	206
Dines, L. H. G., Baker automatic release for dropping meteorograph from a balloon	42
—, Changes of temperature with height in the stratosphere ...	88
—, Maximum heights possible to reach by pilot balloons ...	57
Dines, W. H., and L. H. G. Dines, Mean values of radiation from the sky at Benson	87
Discontinuity, Surfaces of ...	42
Dods, L., Relations between changes of atmospheric pressure and temperature ...	40
Doodson, A. T., Thames floods ...	206
Douglas, C. K. M., Ice crystals	44
—, Line squall and Channel wave of July 20th, 1929	187
—, Problem of convection ...	213
—, Regeneration einer Zyklone über Nord-und Ostsee ...	239
—, Shortage of snow on Ben Nevis	89
—, Surfaces of discontinuity ...	42
—, Thunderstorm of July 20th, 1929	156
Drizzle, Rain falling through ...	137
—, Snow falling through ...	89
Droughts, British floods and ...	37
Dry period, January to March, 1929	71
— weather during 1929	136
— weather January to June, 1929	129
Dryness, Exceptional	89
Duffield, W. G.	171
Durward, J., Bumpiness on the Cairo-Basra route	258
—, Formation of cumulus or cumulo-nimbus near Basra ...	1
Dust counter, Direct vision ...	231
Egypt and the Nile Valley, Meteorological charts of ...	119
—, Formation of surface inversions of temperature with clear skies in	269
Electric charge on rain	260
— potential gradient of the air at Wahnsdorf	20
Empire meteorologists, London, Conference of	201
England, Early cherry culture in	138
Entwistle, F., Conference of Empire meteorologists	201
Europe, Influence of volcanic eruptions on pressure distribution over western	226
Exhibition of the Physical and Optical Societies, Meteorological Exhibits at the ...	17
Exner, F. M., Karten der Atmosphärischen Zirkulation	291
Exposure on climate, Effect of...	96
February temperatures	67
Ferraz, S., Sir Gilbert Walker's formula for Ceará's droughts	81
Floods, Alabama and Mississippi	72
— and droughts, British ...	37
—, Indus	189
—, Thames	206
Floral isophenes	289
Fog and relative humidity, Winter	14, 209

	PAGE
Fogs and May frosts, March	166, 210
Forecasting in Australia, Basis for seasonal	88
Fossil marine faunas as indicators of climatic conditions... ...	145
Fowle, F. E., Atmospheric ozone	216
Free, E. E., and T. Hoke, Weather	169
French daily weather report ...	154
— colonies, Meteorological service for the	166
Frankenfield, H. C.	219
Frost, Some notes on the ...	43
Frosts, March fogs and May	166, 210
Gama, S. da	147
Garnett, H., Contamination of the wick and muslin of wet bulbs	132
Geophysical discussion	219
Giblett, M. A., Mechanism of waterspouts and tornadoes...	63
Glacier, 1927, Studies on the Rhône	135
Glasspoole, J.	147, 295
—, Dry period, Jan. to March, 1929	71
—, Frequency of rain-days ...	144
—, Insplashing into and outsplashing from a rain-gauge	118
—, Rainfall fluctuation in Saragossa	192
—, Rainfall of Januaries, 1928 and 1929	16
—, Rainfall of November, 1929	268
—, Rainfall, 1929	282
Gold, E., Variation of distribution of the annual rainfall ...	260
—, Wet bulb temperatures as "thaw temperatures" ...11,	90
Goldie, A. H. R., Obituary of A. Watt	22
Goldschmidt, H., Das Potentialgefälle der Luft	20
Goodman, E. W., Sun pillar ...	68
Gradient and atmospheric pollution, Potential	134
Granger, R. F. T., Atmosphere as a colloid	262
Gray memorial fund, Thomas ...	49
Gray, R., Low February temperatures	67
Gregory, Sir R., Amateurs as pioneers	10
Green flash	207, 290
Green, R. W., Summer thunderstorms	186
Greenland, Climatic changes in ...	292
Grubb, J., Rainfall on August 4th, 1929	161
Halo into circumzenithal arc ...	207
Harrison, A. F., Audibility of thunder	209
Harrison, D. N., Atmospheric ozone	216
Haurwitz, B., Relations between changes of atmospheric pressure and temperature ...	40
Heat economy, Warm anticyclones and their rôle in atmospheric	19
Heilmann, G., Birthday celebrations of	140
Higgins, W. F. and E. G. Bilham, Changes of zero in spirit thermometers	39
Hiley, F. E., Trees damaged by lightning	139
Hindu meteorology, Ancient	12, 265
Hoke, T. and E. E. Free, Weather	169
Holyhead, Waterspout at ...	291
Hooker, C. P., Notes on the frost	43
Humidity, Slight rain with low ...	47
—, Winter fog and relative	14, 209
Hunt, H. A., Seasonal forecasting in Australia	88
Hunt, T. M., Volcanic eruptions and pressure distribution ...	226
Hurricane at Suva, Fiji	168
Ice crystals	44, 69
— —, Twelve rayed	186
— on the Maplin sands	47
— on the sea near Chester ...	66
— structure, Curious	44
Illumination of barometers ...	107
India Meteorological Dept., Scientific Notes Vol. 1, Nos. 1-3	170
Indies, Climate of the Netherland	241
—, Rainfall in the West ...	290
Indus floods	189
Ink feed for instrument pens of the Crowquill type	238
— for low temperatures, Recording	193
Instruments, Negretti and Zambra's	97
International Meteorological Organization, Commission for synoptic weather information	5
Inversions and grass minimum temperatures	110
Isophenes and isakairs	289
Italian peasantry, Weather lore among	264
Jameson, H., Small upper air velocities at Colombo ...	211
Jones, E. L.	122

PAGE

207
209
216
40
19
140
39
139
2, 265
169
291
43
... 47
1, 209
88
226
168
4, 69
186
47
66
44
107
170
241
290
189
238
193
97
5
110
289
264
211
122

PAGE

Jones, T. W. V., Rainfall on July 4th 137
Jones, W. I., Waterspout at Holyhead 291
Jungfraujoch, New meteorological observatory on the ... 98, 140

Kidson, E., Climate of New Zealand 121
— and H. M. Treloar, Rate of ascent of pilot balloons ... 42
Kirk, E., Fossil marine faunas as indicators of climatic conditions 145
Kitchener, E. 243
Knowles, G., Destructive thunderstorm in December 95

Lapse rate, Index of refraction of damp air and the optical determination of 109
Leaf, C. S., Summer thunderstorms 230
—, Thunderstorm of July 20th, 1929 156
Lewis, C. G. W., Snow falling through drizzle 89
Lightning, Trees damaged by ... 139
Lindholm, F. 219
Line-squall and Channel wave of July 20th, 1929 187
— of July 12th 158
London and St. Albans, Reflectivity of woodland, fields and suburbs between 260
—, Conference of Empire meteorologists 201

MacDougall, R. 195
Manning, T. D., Rainfall at Seaford 271
Margary, I. D. and J. E. Clark, Floral isophenes and isakairs 289
Margary, I. D., Phenological report, British Isles, 1928 ... 108
Marshall, R. 243
Marini, L. 260
Marwick, T. C., Electric charge on rain 110
McAdie, A., Inversions and grass minimum temperatures ... 42
Melbourne, Rate of ascent of pilot balloons at 42
Meteorograph, Baker automatic release for 119
Meteorological charts of Egypt and the Nile Valley 17
— exhibits at the Physical and Optical Societies' Exhibition

PAGE

Meteorological instruments of the late Mr. J. G. Waller ... 119
— Office, Discussions at the 7, 39, 63, 184, 207, 230, 259, 288
— —, Shoeburyness staff dinner 51
— — Soirée 51
— —, Staff news 99
— service, British East African 141
— — for the French Colonies ... 166
— Society, Royal 10, 42, 64, 87, 108, 134, 230, 259, 288
— —, —, Buchan Prize 10
— —, —, Howard Prize 230
— —, —, Symons Gold Medal ... 230
Meteorology, Ancient Hindu 12, 265
—, Problems of tropical ... 153
Meyer, G. M., Early history of the southwest monsoon ... 116
Mill, Mrs. H. R. 195
Mirrlees, S. T. A., Climate of New Zealand 121
—, First cold spell of the year ... 285
—, Indus floods 189
—, St. Swithin's Day 143
—, Unusual ranges of temperature 61
Mississippi and Alabama floods 72
Mock suns, sun pillars and crosses in the sky 84
Moeris and climatic changes, Lake 141
Monsoon, Early history of the southwest 116
Moon through a cloud, Appearance of the 232
Moonbeams analogous to crepuscular rays 115
Moore, Sir J. 265
Mörikofer, W. 219
Morize, H. 147
Morna, A. de F. 98
Mügge, R., Warm anticyclones and their rôle in atmospheric heat economy 19
Mulholland, P. I., Weather, 1929 277
Müller-Pouillets's Handbook of physics 49
Myrbach, O., Bebenauslösende Wirkung der Sonnenflecken ... 121

Negretti and Zambra's instruments 97
New Zealand, Climate of... ... 121
Newnham, E. V., Course of training for observers 213
Nile Valley, Meteorological charts of Egypt and the 119

PAGE

Nisikawa, S. and K. Wada, Measurements with pitot-static tube 7
North Downs, Underground water level in the 161, 185
— Sea, Regeneration of a cyclone over the 239

OBITUARY :—
Duffield, Prof. W. G. 171
Frankenfield, H. C. 219
Jones, Col. E. Lester 122
Kitchener, E. 243
MacDougall, R. 195
Marini, Cav. Prof. L. 243
Mill, Mrs. H. R.... 195
Polis, Prof. P. 243
Rankin, A. 195
Schmidt, Dr. A. von 75
Watt, A. 22
Williams, W. G. 195
Wood, E. S. 171
Observers, Course of training for 162, 213
Observer's experiences 142
Observatory on the Jungfraujoch, New meteorological ... 98, 140
Oddie, B. C. V., Solar activities and weather changes ... 39
—, Supercooling on water films on wet bulbs 180
Official Notices 162, 184
— publications ... 5, 39, 206, 238
Ozone, Atmospheric 216

Pace, H. L., Slight rain with low humidity 47
Parhelia, Brillant 90
Parker, R. E., Halo into circum-zenithal arc 207
Parsons, F. J., Ice crystals ... 44
—, Scanty rainfall of 1929 ... 114
Phenological report 108
Physics of the earth 49
Pick, W. H., Appearance of the sun and moon through a cloud 232
—, Screen minimum temperatures during radiation nights ... 114
—, Fog and relative humidity ... 209
— and R. C. Sutcliffe, Winter fog and relative humidity ... 14
Pilot balloons at Melbourne, Rate of ascent of 42
— —, Maximum heights which it is possible to reach by ... 57
— —, Vertical air-currents as measured by 135
Pitot-static tube, Measurement of variable velocity with... ... 7

PAGE

Poletika, W. v. Agroklimatische Verhältnisse Russlands ... 146
Polis, P. 243
Pollution, Potential gradient and atmospheric 134
Portugal, Marine meteorological service 98
Pouillets's Handbook of physics ... 49
Pressure and temperature, Relations between changes of ... 40
— distribution, Influence of volcanic eruptions on 226
— tube anemograph, Density of the air and readings of ... 233
Pye, L. W., Double wind reversal 231

Radiation nights, Screen minimum temperatures during ... 114
Ramakrishnan, K. P., Numbering of hours on autographic charts 160
Rankin, A. 195
Rain, Electric charge on ... 260
— falling through drizzle ... 137
— gauge, Insplashing into and outsplashing from 118
— gauges in winter 252
— with low humidity, Slight ... 47
Rainbows, pink 13
Rain-days, Frequency of ... 144, 185
Rainfall and the average amount of cloud, Annual 253
— at Seaford, Heavy 271
—, Barometric oscillation and ... 191
—, Diurnal variation of 167
— fluctuation in Saragossa ... 192
— in the West Indies 200
— of Januaries, 1928 and 1929, 16
— of November, 1929 268
— of 1929, Scanty 114
— on August 4th, 1929 161
— on July 4th 137
—, Smoke and hot gases from factory chimneys and ... 109
— Tables, 1929 ... ... *monthly*
—, Variation of distribution in the annual 234, 260
—, 1929 282
—, 1929, General distribution *monthly*
Ranges of temperature, Unusual... 61
Record, Neuenhofen's altitude ... 147
Reflectivity of woodland, fields and suburbs 260
REVIEWS :—
Banister, H., Elementary applications of statistical method 294
Brooks, C. E. P. and J. Glasspoole — British floods and droughts; R. Corless 37

	PAGE
Exner, F. M., Karten der Atmosphärischen Zirkulation	294
Fowle, F. E. — Atmospheric ozone: D. N. Harrison ...	216
Free, E. E. and T. Hoke—Weather: C. E. P. Brooks ...	169
Geiger, R.—Messung des Expositionsklimas. *Forstwiss Centralbl., Berlin, 49, 50, 51*	96
Glasspoole, J. and C. E. P. Brooks — British floods and droughts: R. Corless	37
Goldschmidt, H.—Das Potentialgefälle der Luft in Wahnsdorf: R. E. Watson	20
Hoke, T. and E. E. Free—Weather: C. E. P. Brooks...	169
India Meteorological Dept., Scientific Notes, Vol. 1, Nos. 1-3...	170
Kenya, British East African Meteorological Service, Memoir 1	141
Kidson, E.—Climate of New Zealand: S. T. A. Mirrlees ...	121
Kirk, E.—Fossil marine faunas as indicators of climatic conditions	145
McDonald, W. F.—Hourly frequency and intensity of rainfall at New Orleans	167
Moore, W. D.—Weather diary: R. Corless	266
Mügge, R.—Über wärme Hochdruckgebiete und ihre Rolle im atmosphärischen Wärmehaushalt: D. Brunt	19
Müller-Pouillets — Physik der Erde: C. E. P. Brooks ...	49
Myrbach, O.—Bebenauslösende Wirkung der Sonnenflecken: F. J. Scrase	121
Negretti and Zambra—List of instruments	97
Poletika, W.—Agroklimatische Verhältnisse Russlands ...	146
Quilez, J. D. y—La fluctuation de la precipitation en Zaragoza: J. Glasspoole	192
Schroder, R. — Regeneration einer Zyklone über Nord-und-Ostsee: C. K. M. Douglas ...	239
Scott, W. B.—Geological climates	145
Spitsbergen papers, Vol. 2 ...	240
Walker, Sir G. T.—Some problems of Indian meteorology..	153
Ward, R. de C.—Climatology and some of its applications...	270
See also Official Publications.	

	PAGE
Rhône Glacier, 1927, Studies on	135
Richardson, L. F.	117
—, Reflectivity of woodland, fields and suburbs	260
Rime at Sealand on December 15th, 1928	15
Russell, S. C., Sun pillar... ...	68
—, Underground water level in the North Downs ... 161,	185
St. Swithin's Day	143
Sandeman, R. G., Notes on the frost	43
Saragossa, Rainfall fluctuation in	192
Schmidt, A. von	75
Schroder, R., Die Regeneration einer Zyklone über Nord- und Ostsee	239
Scott, W. B., Geological climates	145
Scrase, F. J., Bebenauslösende Wirkung der Sonnenflecken ...	121
Sea, Smoking	261
Sealand Dec. 15th, 1928, Rime at	15
Simmonds, L. F. G., Research on the Dines anemometer ...	7
Single, S., Perplexities of winter, 1928-9	137
—, Smoke from trees	187
Sky, Colouring of evening ...	261
Slater, G., Studies on the Rhône Glacier, 1927	135
Smoke and hot gases from factory chimneys and rainfall ...	109
— cloud 71,	113
— from trees 187,	230
Snow falling through drizzle ...	89
— on Ben Nevis, Shortage of ...	89
Solar activity and long-period weather changes	39
Somerville, J. J., Rime at Sealand	15
South African Associations ...	225
Southcombe, H. W., Colouring of evening sky	261
Southwest monsoon, Early history	116
Spence, M. T., Thunderstorm at "warm front" of depression	291
Spitsbergen papers, Vol. 2 ...	240
Star, C. V., Green flash	290
Statistical method, Elementary applications of	294
Steiner, R., Surface inversions of temperature	8
Storm of Nov. 11th-12th, 1929 ...	249
Sturch, J., Line-squall of July 12th	158
Sumatras	186
Sun pillar	67
—, March 29th	68

PAGE

Sun pillars and crosses in the sky 84
— through a cloud, Appearance of 232
Sunshine recorder, Adjustment of a 74
— records during the spring and summer of 1929 163
Sunshine, 1929 277
Sunspots and temperature ... 212
— on the generation of earthquakes, Effect of 121
Surfaces of discontinuity 42
Sutcliffe, R. C. and W. H. Pick, Fog and relative humidity ... 14
Suva, Fiji, Hurricane at 168

Tarrant, H. L. B. 295
Temperature and sunspots ... 212
— of 1929 277
— over the globe, Distribution of mean annual maxima and minima of 6
—, Relations between changes of atmospheric pressure and ... 40
—, Unusual ranges of 61
— with clear skies and land breezes, Formation of surface inversions of 8
— with clear skies in Egypt, surface inversions of 269
— with height in the stratosphere, Changes of 88
Temperatures as "thaw temperatures," Wet bulb ... 11, 90
— during radiation nights, Screen minimum 114
— in a well, Air 47
—, Inversions and grass minimum 110
—, Low February 67
—, Recording ink for low ... 193
—, Ten-day period 120
Thames floods 206
— Valley, Underground water level in the 93, 233
Thermometers, Changes of zero in spirit 39
Thorman, G. L. and C. E. P. Brooks, Distribution of temperature over the globe ... 6
Thunder, Audibility of 209
Thunderstorm at "warm front" of depression 291
— in December, Destructive ... 95
— of July 20th, 1929 156
Thunderstorms, Summer 186, 230, 261
—, Winter 48
Tides in the Thames, Meteorological conditions associated with high 206
Tornado in Dublin in 1850 ... 266
Tornadoes, Mechanism of... 63, 290

PAGE

Treloar, H. M. and E. Kidson, Rate of ascent of pilot balloons at Melbourne ... 42
Tropical meteorology 153
Turner, H. E., Sumatras 186
Twentyman, E. W. G. 295
Twist, T. F., Line-squall of July 12th 158

Unakar, M. V., Ancient Hindu meteorology 12, 265
Upper air velocities at Colombo 211
U.S.A. grain crop, Correlation between Argentine maize crop and 214

Vedy, L. G., Moonbeams analogous to crepuscular rays ... 115
Visibility, Physical conditions controlling 259
Volcanic eruptions and pressure distribution 226

Wada, K. and S. Nisikawa, Measurements with pitot-static tube 7
Wahnsdorf, Atmospheric potential gradient at 20
Walker's formula for Ceará's droughts, Sir Gilbert ... 81
Walker, Sir G. T., Mechanism of tornadoes 290
—, Meeting of British and South African Associations 225
Waller, Meteorological Instruments of the late Mr. J. G. 119
Ward, R. de C., Climatology and some of its applications ... 270
Water level in the North Downs, Underground 161, 185
— — in the Thames Valley, Underground 93, 233
Waterspout at Holyhead 291
Waterspouts in British waters, Frequency of 236
—, Mechanism of 63
Watson, R. E., Das Potentialgefälle der Luft 20
Watt, A. 22
Watt, R. A. W., Weather and wireless 64
Weather and wireless 64
— diary, 1848-1851 266
— lore 138
— — among the Italian peasantry 264
— maps, Wireless transmission of 95
— of December, 1928, January and February, 1929, Winter 1
— of January to June, 1929, Dry 129
— of 1929 ... ...277, *monthly*

	PAGE
Weather, Practical, dramatic and spectacular facts	169
— report, French daily	154
—, Sixteenth century ...	231, 290
Wegener, A., Mechanism of waterspouts and tornadoes	63
Well, Air temperatures in a ...	47
Weller, H. J., Ice crystals ...	44
Weston, G., Exceptional dryness	89
Wet bulb temperatures as " thaw temperatures " ...	11, 90
— bulbs at coastal stations, Contamination of the wick and muslin of	192
— —, Supercooling on water films on	180
Whipple, F. J. W., Atmosphere as a colloid	193
—, Direct vision dust counter ...	231
Whipple, F. J. W., Halo into circumzenithal arc	207
—, Ice crystals	69
—, Potential gradient and atmospheric pollution ...	134
—, Smoke cloud	71, 113
—, Sun pillar	67
—, Sun pillars, crosses in the sky and mock suns	84
—, Twelve-rayed ice crystals ...	186
—, Underground water level in the Thames Valley ...	93, 233
Williams, W. G.	195
Wind reversal, Double	231
—, 1929	277
Winter of 1928-9, Some perplexities of the	105, 137
Wireless and weather	64
— transmission of weather maps	95
Wood, E. S.	171

ERRATA

See pages 9, 99, 119, 147.

ILLUSTRATIONS

	PAGE
Rime at Sealand, near Chester, 10h. 30m., December 15th, 1928	*Frontispiece*
Pressure anomalies, December, 1928, January, 1929	2
Diagram of cloud over Basra, November 17th, 1928	4
Path of a monsoon cloud in " Meghaduta "	12
Curious ice structure	*facing p.* 29
Mean daily temperatures, Februaries, 1895 and 1929	32
Upper air temperatures, February, 1929	33
Pancake ice on the river Dee at Queensferry, Cheshire, February 14th, 1929	*facing p.* 57
Thermogram, South Farnborough, March, 1929	62
Weather chart and forecast transmitted by the Fultograph system	94
Cross sections of barometer box showing means of illumination ...	107
Curves showing temperature inversions in relation to frosts ...	111
Thermogram illustrating typical late spring frost	111
Position of new meteorological observatory on the Jungfraujoch	*facing p.* 129
Pressure anomalies, 1929	130
Humidity-Time graph	133
Humidity curves	134
Elm tree, Chorley Wood, struck by lightning	*facing p.* 139
Bulletin Quotidien d'Etudes, July 11th, 1929, page 3 ...	*facing p.* 153
Bell Rock anemometer	*facing p.* 177
Map showing situation of the Bell Rock anemometer	178
First anemogram obtained at the Bell Rock lighthouse	179
Variation of temperature before, during and after freezing ...	182
Cases of wet bulb " sticking " at 32°F. during period of rising temperature	183
Double sun rings	208
Halo changed into circumzenithal arc	208
Variations in strength of atmospheric circulation following explosive eruptions	226
Deviations of pressure from normal, October to December ...	229
Autographic records at Cardington, November 11-12th, 1929	*facing p.* 249
Synoptic chart 6 p.m., November 11th, 1929	251
Frost protector for rain gauge	254
Diagram showing relation between rainfall and cloud	257
Weather of 1929 in southeast England	281
Kew temperature	286